

CHANGES IN THE ANT (HYM.: FORMICIDAE) FAUNA OF A SWEDISH BOGLAND AREA 1986-1997

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Introduction

A WOODLAND HABITAT near the village of Flöghult, 16km east of Strömstad was visited over a period of eleven years and the ant fauna studied. The area comprised three large open mires or bogland habitats with characteristic mire flora, including a few stunted *Pinus sylvestris* and scattered *Alnus* and *Betula* trees. At the time of the first visit in 1986, the bog ants *Formica uralensis*, *F. forsslundi*, *F. transcaucasica* and a bogland form of *Myrmica scabrinodis* were found in several flourishing colonies. In 1997, *F. transcaucasica* which had been abundant had almost disappeared and was only found sparsely in one of the bogs; one very small nest of *F. forsslundi* was seen and *F. uralensis* had disappeared. *M. scabrinodis* and a variety of other species were still plentiful but the three bogland areas had been overrun by flourishing colonies of *Lasius platythorax*.

At the time of the first visits in 1986 and 1988, ants of the *Lasius niger* species-group were scarce and found only around domestic premises and sparsely in old quarry workings. Much of the woodland had been drastically thinned in the years 1994 and 1995 and much of the woodland floor consisted of exposed tree stumps, fallen trees and discarded branches. An evident population explosion of *Lasius platythorax* had occurred by 1997 and almost every unshaded tree stump was occupied by a flourishing colony of this species. In every nest, winged sexuals were abundant. These ants were also seen in large quantities in bog tussocks in the mires and are presumed to have decimated the more specialised bogland ants with the exception of *Myrmica scabrinodis* and *M. ruginodis* which were plentiful. The only *Formica* species found in the main bogs were *F. fusca*, *F. sanguinea* and, once only, *F. lemani*. *Lasius platythorax* was recognised and described as a good species by Seifert (1991). It is very similar in aggressive behaviour, activity and appearance to the well known *L. niger* so characteristic of urban habitats. Seifert (*op. cit.*) showed that *L. platythorax* differentially occupied woodland habitats and characteristically nested in semi-rotten tree stumps. Another process involved in the decline of the more specialised bog ant species was almost certainly the slow, but progressive, drying-out of the bogland areas, but there was always a residuum of permanently wet patches and the dramatic decline of *F. transcaucasica* in particular is attributed to aggressive competition by *Lasius*.

A list of all ant species recorded from the vicinity of Flöghult is given below.

- Myrmica lobicornis* Nyl. – scarce, on dry banks only;
- M. rubra* L. – occasional in bog or banks near streams;
- M. ruginodis* Nyl. – general everywhere;
- M. sabuleti* Meinert – in open sandy areas rather local;

- M. scabrinodis* Nyl. – abundant in bog but not in woodland;
M. schencki Em. – rare in sheltered sun exposed area only;
M. sulcinodis Nyl. – locally flourishing in drier bog;
M. (Sifolinia) karavajevi Arnol'di – in *M. scabrinodis* nest;
Leptothorax acervorum Fab. – common in both bog and woodland;
L. muscorum Nyl. – occasional;
L. tubereum Fab. – occasional in stumps;
Formicoxenus nitidulus Nyl. – in nests of *Formica lugubris*;
Harpagoxenus sublaevis Nyl. – seen once only with *L. acervorum*;
Tetramorium caespitum L. – local lakeside sand;
Camponotus herculeanus L. – common throughout the woodland;
C. ligniperdus Latreille – in warm places outside area;
Lasius flavus Fab. – exposed woodland only;
L. fuliginosus Latr. – garden hedge along woodland ride;
L. mixtus Nyl. – rare, once only in cleared woodland;
L. niger L. – neighbourhood of houses;
L. platythorax Seifert – abundant everywhere in 1997;
Formica aquilonia Yarrow – relatively hairless form abundant throughout woodland;
F. exsecta Nyl. – scarce in area but abundant near coast;
F. forsslundi Lohm. – restricted to wet bog, now scarce;
F. fusca L. – in open woodland and banks;
F. lemani Bond. – occasional in bogs;
F. lugubris Zetterstedt – local group nests in woodland;
F. pratensis Retz. – roadside verges;
F. rufibarbis Fab. – on warm bank outside area;
F. rufa L. – single nests fringing bog or sheltered woodland;
F. sanguinea Latr. – in open woodland and bogland stumps;
F. transcaucasica Nasonov (nec *F. candida* Smith) – once abundant in all bogs but populations much reduced by 1997;
F. truncorum Fab. – single nests in warm banks;
F. uralensis Ruzsky – not found after 1993.

Reference

- Seifert B., 1991. *Lasius platythorax* n.sp., a widespread sibling species of *Lasius niger*. *Entomologia Generalis* 16: 69-81.
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